

CLAIMS

What is claimed is:

1. A speech processing method comprising:
scaling a decision tree-based model for a given task.
2. The method of claim 1, wherein the decision tree-based model is a decision tree-based hidden markov model (HMM).
3. The method of claim 1, further comprising:
adapting the scaled decision tree-based model for the given task.
4. A speech processing system comprising:
a memory to store a decision tree-based model for a given task; and
a processor to scale the decision tree-based model for the given task.
5. The system of claim 4, wherein the decision tree-based model is a decision tree-based hidden markov model (HMM).
6. The system of claim 4, wherein the processor is to adapt the scaled decision tree-based model for the given task.
7. A machine-readable medium that provides instructions, which if executed by a processor, cause the processor to perform the operations comprising:
scaling a decision tree-based model for a given task.
8. The machine-readable medium of claim 7, further providing instructions, which if executed by a processor, cause the processor to perform the operations of:
scaling the decision tree-based model based on a hidden markov model (HMM)
for the given task.
9. The machine-readable medium of claim 7, further providing instructions, which if executed by a processor, cause the processor to perform the operations of:

adapting the scaled decision tree-based model for the given task.

10. A speech processing method comprising:
collecting a vocabulary knowledge of a given task; and
trimming down a general model according to the vocabulary knowledge of the given task.
11. The method of claim 10, further comprising:
adapting the trim-down general model for the given task.
12. The method of claim 11, wherein the adapting the trim-down general model includes:
collecting adaptation data, the adaptation data being related to the given task;
and
adapting the trim-down general model to a task dependent model using the adaptation data.
13. The method of claim 12, further comprising:
interpolating the trim-down general model with the task dependent model to obtain a task specific model.
14. The method of claim 10, wherein the general model is a hidden markov model (HMM).
15. A speech processing system comprising:
a memory to store a general model; and
a processor to collect a vocabulary knowledge of a given task and to trim down the general model according to the vocabulary knowledge of the given task.
16. The system of claim 15, wherein the processor is to adapt the trim-down general model for the given task.

17. The system of claim 16, wherein the processor is to collect adaptation data, the adaptation data being related to the given task and adapt the trim-down general model to a task dependent model using the adaptation data.
18. The system of claim 17, wherein the processor is to interpolate the trim-down general model with the task dependent model to obtain a task specific model.
19. The system of claim 15, wherein the general model is a hidden markov model (HMM).
20. A machine-readable medium that provides instructions, which if executed by a processor, cause the processor to perform the operations comprising:
 - collecting a vocabulary knowledge of a given task; and
 - trimming down a general model according to the vocabulary knowledge of the given task.
21. The machine-readable medium of claim 20, further providing instructions, which if executed by a processor, cause the processor to perform the operations of:
 - adapting the trim-down general model for the given task.
22. The machine-readable medium of claim 21, further providing instructions, which if executed by a processor, cause the processor to perform the operations of:
 - collecting adaptation data, the adaptation data being related to the given task;
 - and
 - adapting the trim-down general model to a task dependent model using the adaptation data.
23. The machine-readable medium of claim 7, further providing instructions, which if executed by a processor, cause the processor to perform the operations of:
 - interpolating the trim-down general model with the task dependent model to obtain a task specific model.